

INTERNATIONAL SEARCH REPORT

International Application No.

PCT/FR 03/03863

A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 G11C11/16 H01L29/66

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 G11C H01L

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data, PAJ, IBM-TDB, COMPENDEX, INSPEC

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 5 962 905 A (KAMIUCHI YUZO ET AL) 5 October 1999 (1999-10-05) cited in the application figure 5 column 5, line 45 - column 6, line 5	1,2,7
A	E.I. RASHBA: "Theory of electrical spin injection : tunnel contacts as a solution of the conductivity mismatch problem" PHYSICAL REVIEW B, vol. 62, no. 24, 15 December 2000 (2000-12-15), - 15 December 2000 (2000-12-15) pages 267-270, XP002253319 USA page 269, column 1, paragraph 3 - page 270, column 1, paragraph 1 -/-	3-5

☒ Further documents are listed in the continuation of box C.☒ Patent family members are listed in annex.

* Special categories of cited documents:

A document defining the general state of the art which is not considered to be of particular relevance

E earlier document but published on or after the international filing date

L document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

O document referring to an oral disclosure, use, exhibition or other means

P document published prior to the international filing date but later than the priority date claimed

T later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

X document of particular relevance: the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

Y document of particular relevance: the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art

Z document member of the same patent family

Date of the actual completion of the international search

6 July 2004

Date of mailing of the international search report

19/07/2004

Name and mailing address of the ISA

European Patent Office, P.B. 5818 Patentlaan 2
NL - 2280 HV Rijswijk
Tel. (+31-70) 340-2040, Tx. 31 651 epo nl,
Fax (+31-70) 340-3018

Authorized officer

Havard, C

INTERNATIONAL SEARCH REPORT

International Application No.

PCT/FR 03/03863

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT		
Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	V.I. SAFAROV, V.F. MOTSNYI, J. DE BOECK, J. DAS, W. VAN ROY, G. BORGHS AND E. GOOVAERTS: "Electrical spin injection in a ferromagnet/tunnel barrier/semiconductor heterostructure" APPLIED PHYSICS LETTERS, vol. 81, no. 2, 8 July 2002 (2002-07-08), - 8 July 2002 (2002-07-08) pages 265-267, XP002253320 USA figure 1	3-5
A	US 2001/031547 A1 (OHNO HIDEO ET AL) 18 October 2001 (2001-10-18) figure 5 paragraph '00271	1-7

INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/FR 03/03863

Patent document cited in search report		Publication date		Patent family member(s)	Publication date
US 5962905	A	05-10-1999	JP	10150232 A	02-06-1998
US 2001031547	A1	18-10-2001	JP	3284239 B2	20-05-2002
			JP	2001250998 A	14-09-2001